DOCUMENT RESUME

ED 334 906 HE 024 735

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TITLE Causal Attributions for College Success and Failure: An American-Asian Comparison.
PUB DATE Apr 91
NOTE 20p.; Paper presented at the Annual Meeting of the American Educational Research Association (Chicago, IL, April, 1991).
PUB TYPE Speeches/Conference Papers (150) -- Reports - Research/Technical (143)

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS *Academic Achievement; Academic Aptitude; *Academic Failure; Attitude Measures; *Attribution Theory; Beliefs; *College Students; Comparative Analysis; Cultural Influences; *Educational Attitudes; Ethnic Groups; Higher Education; Locus of Control; Responsibility; Self Fulfilling Prophecies; *Student Attitudes; Undergraduate Study
IDENTIFIERS Asian Students

ABSTRACT

This study compared possible causal attributions for college success and failure in American and Asian students via a sample of 358 undergraduate students who were administered the Multi-Dimensional-Multi-Attribution Causality Scale (MMCS). American, Chinese, Japanese, Korean, and Southeast Asian subjects reported a higher average of perceived personal responsibility for academic success than for failure. The hypothesis of "self-serving" bias in attribution was also supported. Subjects across the five nationalities tended to attribute success more than failure to internal factors and to attribute achievement to their own effort rather than to task difficulty or luck. That the American students attributed achievement more to ability while the Asian students stressed effort is discussed in terms of cultural values and national characteristics. Contains 17 references. (Author/GLR)

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Causal Attributions for College Success and Failure: An Asian-American Comparison[1]

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Abstract

To compare possible causal attributions for college success and failure in American and Asian students, a sample of 358 undergraduate and graduate students was administered the Multi-Dimensional-Multi-attribution Causality Scale (MMCS). American, Chinese, Japanese, Korean, Southeast Asian subjects reported a higher average of personal responsibility for academic success than for failure. The hypothesis of 'self-serving' bias in attribution was also supported. Subjects across the five nationalities tended to attribute success more than failure to internal factors as well as attributing achievement to their own effort rather than to the task difficulty or luck. That the American students attributed achievement more to ability while the Asian students stressed effort is discussed in terms of cultural values and national characteristics.

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[1]Paper presented at the annual meetings of the American Educational Research Association, Chicago, April, 1991.

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INTRODUCTION

Attribution Theory

Rooted in attribution theory, the recent explorations of achievement motivation have investigated factors that appear to determine and influence the academic performance of college students. Typically, these causal factors are conceptualized as ability, effort, task, and luck (Weiner, 1979, 1986).

According to Weiner's causal attribution model, these four perceived causes represent the three dimensions of stability, locus of control, and controllability. Stability refers to the temporal nature of a cause; which may be relatively enduring or change by situation and in time. Locus of control refers to the site of a cause – inside or (internal to) or outside (external to) the person. And controllabililty refers to the degree of volitional influence one has over a cause. From the stability dimension point of view, ability and task are considered to be stable, while effort and luck are viewed to be more changeable and . Ability and effort are viewed as internal while task difficulty and luck are conceptualized to be external. Effort is viewed as a controllable cause, while ability, task, and luck are uncontrollable. For example, attribution to good luck as an explanation for passing an examination would be thought of as external, unstable attribution. The attribution to ability for the same passing grade would represent a stable, internally perceived cause for cause. Thus, the attribution approach provides a means of examining some of factors determining and influencing college students' academic performance (Betancourt & Weiner, 1982).

Cross-cultural Investigation of Causal Attribution

To date, most studies of causal attribution have been conducted with western population (Bond, 1986; Schuster, Forsterlung, & Weiner, 1989). Several cross-cultural studies have addressed the issues of: (a) identification of perceived causes of success and failure; (b) cultural variation in attributions for success and failure; and, (c)

cultural variation in positive bias of attribution. These have included:

Identification of perceived causes of success and failure. Triandis (1972) reported that ability and effort are perceived to be among the main causes of achievement outcomes in the United States, while tact was identified as the dominant cause of success in India.

Betancourt and Weiner (1982) examined dimensional perceptions of eight causes of achievement success and failure among both Chilean and American subjects. The causes were classified in a Locus × Stability × Controllability matrix. While comparative ratings of the causes in the two cultures yielded great similarities, several cultural differences emerged. exhibited. Thus, Chileans perceived the external causes as more external, the stable causes as less stable, and the controllable causes as less controllable than American subjects.

Cultural variation in attributions for success and failure. Hess, Chang, and Mcdevitt (1987), investigating cultural differences in beliefs about children's performance in mathematics, interviewed mothers and their sixth-grade children in the People's Republic of China (PRC) and in Chinese-American and Caucasian-American groups in the United States. Different patterns of attributions emerged where mothers in the PRC viewed lack of effort as the major cause of low performance. Chinese-Americans also viewed lack of effort as important but assigned considerable responsibility to other sources while Caucasian-Americans distributed responsibility more evenly across their options.

A more recent study conducted by Mizokawa and Ryckman (1990) compared the differential attributional pattern for success and failure in six Asian American subgroups: Chinese, Filipino, Japanese, Korean, Vietnamese, and other Southeast Asians and with very distinctive attributional profiles emerging among these groups.

They also found that attributions for success and failure were associated with socio-economic status as well as subject content areas (i.e., mathematics/science versus language arts/social studies).

Cultural variation in positive bias on attribution. Smith, Whithead and Sussman (1990) investigated cultural variation in the pattern of the positivity bias on attributional measures. Japanese subjects attributed a positive outcome (i.e., promotion), more than a negative outcome (i.e., demotion), to ability and effort, and negative outcomes (demotion), more than the positive outcomes (promotion) to task difficulty. By contrast, Americans attributed promotion, more than the demotion, to ability and effort; people from the Third World attributed demotion, more than the promotion, to task difficulty. They concluded that their Japanese subjects evidenced a positive bias on both internal and external measures, Americans evidenced a positivity bias on an internal measure, and Third World subjects evidenced a positivity bias on an external measure.

These studies comparison differences in American and Asian cultures suggest two distinct trends. First, there may be a general cross-cultural tendency in causal attribution where both American and Asian students may attribute more of their academic outcomes to effort than to ability. Second, American students may be significantly different from Asian students in attribution orientation. For example, the Asian students may place greater emphasis than American subjects to effort as the cause of academic success. Americans make more evenly distributed attributions among the possible sources (Hess, Chang, & McDevitt, 1987; Holloway, Kashiwagi, Hess, & Azuma, 1986).

It is important to note that these findings were found with school children population (e.g., Hess, et al., 1987) or for attributions regarding job-related outcomes (e.g., Smith, et al., 1990). Whether similar findings would be obtained for college students

or other types of tasks (e.g., academic) is up for speculation. Also, between group differences among the Asian population may be quite great, due to the very distinct subgroups in demographic variables such as language, religion and values.

Research Questions

The purpose of the present investigation was to examine the causal attributions for college successes and failures in American and Asian students. Specifically, the purpose was to examine the extent to which culture, gender and academic major were related to attributional patterns for success/failure outcomes among American and Asian university students.

Four specific questions were addressed: (a) Do differences exist in total achievement attributions scoring among university students between the conditions of success and failure? (b) Do differences exist among university students from different cultures in attribution patterns between the success and failure conditions? (c) Do differences exist between males and females in attributional patterns between the success and failure conditions?, and; (d) Do differences exist among students with academic major fields in attribution patterns between the success and failure conditions?

METHOD

Subjects

A total sample of 358 Asian and American undergraduate and graduate students enrolled in a large northeastern state university participated in the study. They ranged in age from 19 to 46, with mean age of 29. Of the 358 students, 69 were American (34 females and 35 males). Because of the multi-ethnic background of the American students, and the focus of the present study, Asian-Americans were not included. Of the 69 Americans, 23 student were from the management school, 23 from the natural science and engineering school, and 23 from the school of education

and social sciences. The Asian students were: (a) Chinese group, including 36 from the Peoples' Republic of China, (P. R. C.), 32 from Taiwan, and 25 from Hong Kong. Of the 93 Chinese students, 34 were major in management, 35 in science and engineering, and 24 in education and social science. 38 were females, and 55 males. (b) Japanese group, including 15 students from the management school, 15 from the science and engineering school, and 30 from the education school (intensive English training program). Of the 60 Japanese, 28 were females, and 32 males. (c) Korean group, including 19 students majored in management, 27 majored in science and engineering, and 22 majored in social science and education. Of the 68 Korean, 29 were females, and 39 males. (d) Southeast Asian, including 18 Filipino, 22 Vietnamese, and 16 Indonesian, 12 Malaysian. Of the 68 Southeast Asians, 22 students had a management major, 24 had a science and engineering major, and 22 a education and social science major. 34 were females and 34 males. All Asian students were fluent in English.

Instrument

Early cross-cultural studies on achievement motivation have employed Rotter's Internal-External (I-E) Scale or a variant of it (e.g., Hsieh, Shybut, & Lotsof, 1969; Paresons, Schneider, & Hansen, 1970). Munro (1979) criticized the use of a generalized locus of control scale, such as the Rotter I-E Scale, in cross-cultural studies because it fails systematically to vary situations, agents of action, outcomes, and consequences. Weiner (1979) had indicated that the locus of control and stability dimensions have been confounded in the locus of control literature. For example, ability and effort are internal factors. However, internal locus has been linked to a stable dimension (ability) as well as to an unstable dimension (effort). Similarly, task and luck are external factors, and external locus is linked to both a stable (task) and an unstable dimension (luck) (cited from Chandler, Shama, Wolf, & Planchard, 1981).

Therefore, a goal specific multi-attributional assessment was called for so that differentiations could be made between success and failure, internality and externality, stability and unstability.

The Multidimensional- Multi-attribution Causality Scale (MMCS) developed by Lefcourt, Von Baeyer, Ware, and Cox (1979) was used in the present study. The MMCS includes four attributions (e.g., ability, effort, task difficulty, and luck) suggested by Weiner (1979). These four attributions are distributed randomly across success and failure items. The 48-item MMCS consisted of 24 items tapping the achievement domain and 24 items tapping the affiliation domain. For the purpose of this study, only the 24 items tapping the achievement domain were included.h The 12 items concerning success and 12 concerning failure experiences were divided equally, via four attributions, so that there are 6 items focusing on ability, 6 items involving effort, 6 focusing on task, and 6 items focusing on luck. Item responses were scored from 1 (disagree) to 5 (agree), with scores ranging from 3 to 15 for each attribution. Two examples of typical statements taken from this MMCS were (the attributional assignments and success or failure condition were in parentheses) "I feel that my good grades reflect directly on my academic ability"(ability; success); "Some of my lower grades have seemed to be partially due to bad breaks "(luck; failure).[2]

The subjects were told that: "We are trying to determine what specific causal factors of failure /success mean to people. Here is a series of factors which you are to rate on a set of 5 point scales. Circle the number of your choice. Remember, that there are no right or wrong answers. We are interested in knowing what you think or feel." Once the subjects fully understood the instructions and ensured correct usage of the rating scale, they were asked to complete the questionnaire.

[2]According to Lefcourt (1978), test-retest correlations ranged from .51 to .62., on the interval lapse ranging from one week to four months. Internal consistency (Coefficient alpha) was reported between .58 and .80 (Lefcourt, 1978). In addition, the MMCS has been correlated with Rotter (1966) I-E scale. The correlations between the MMCS and the I- E scale have been found to be positive, ranging from 0.23 to .62 (Lefcourt, Von Baeyer, Ware, & Cox, 1979).

RESULTS AND DISCUSSIONS

With attributions (ability, effort, task, and luck) as dependent variables, nationality of subjects (American, Chinese, Japanese, Korean, and Southeast Asian), gender (females and males), academic major field (management, natural science/engineering, and education/social science) and outcome (successes and failures) as independent variables, a 5 × 2 × 3 × 2 multivariate analysis of variance (MANOVA) was performed, in which nationality, gender, major were between-groups factors, and outcome was with-group factor.

Outcomes (Success/Failure) Effects

The mean attribution scores for achievement successes and failures shown in Table 1 indicate that the subjects from all countries, on the average, attributed successes first to their effort (M=11.58), then to ability (M=11.04), ease of task (M=8.24), and luck (M=7.60). For achievement failures, lack of effort (M=11.55) was again the strongest attribution, the other three factors: lack of ability (M=7.87), task difficulty (M=7.56) and bad of luck (M=7.32) were equally attributed.

MANOVA analysis yielded a significant main effect for outcome (success and failure), $F(4, 325) = 81.64, p < .0001$. Univariate tests for outcomes indicating that subjects across all countries attributed their successes significantly more than their failures to (a) ability, $F(1, 328) = 290.42, p < .0001$; (b) task, $F(1, 328) = 12.00, p < .001$; and luck, $F(1, 328) = 4.63, p < .03$. The univariate tests also indicated that while effort was the strongest attribution for both successes and failures, no significant outcome effort emerged, $F(1, 328) = .517, p = .473$.

Nationality Effects

The mean scores of attributions make by students from five nationality groups across outcome (success/failure), are also summarized in Table 1, where nationality appeared as a significant main effect, $F(16, 1294) = 3.30, p < .0001$.

TABLE 1
Attributions for Academic Achievement as a Function of Outcomes (Success / Failure) and Nationality of Subject

Outcomes	American	Chinese	Japanese	Korean	Southeast Asian	Pooled Mean
			Ability			
Success	12.41	10.61	10.43	10.83	10.97	11.04
Failure	8.49	7.34	7.91	8.02	7.76	7.87
Total	20.90	17.96	18.35	18.86	18.73	18.91
			Effort			
Success	12.62	11.20	11.43	11.55	11.23	11.58
Failure	11.78	11.31	11.25	12.17	11.27	11.55
Total	24.41	22.52	22.68	23.74	22.51	23.14
			Task			
Success	8.67	7.98	8.78	8.42	7.50	8.24
Failure	8.21	7.24	7.10	7.66	7.68	7.56
Total	16.88	15.21	15.88	16.09	15.18	15.81
			Luck			
Success	7.39	7.64	7.68	8.32	7.00	7.60
Failure	7.43	7.06	7.30	7.33	7.53	7.32
Total	14.83	14.71	14.98	15.66	14.53	14.92

The univariate tests indicated that students with different nationality background significantly differed with each other in attributions (a) for ability, $F(4, 328) = 8.36, p < .0001$; (b) for effort, $F(4, 328) = 3.16, p < .01$; and and (c) for task, $F(4, 328) = 2.78, p < .03$. However, they did not significantly differ in attributions for luck, $F(2, 328) = .87, p = .48$.

Scheffe posterior comparisons indicated that differences were primarily due to the strong differences in attribution to ability between American students and Asian students. American students attributed their academic achievement significantly more to ability than did the students from China, Japan, Korean, and Southeast, (all $p < .05$), indicating that on the average, American students were more likely to attribute their achievement to ability. But for attributions to effort and task, Scheffe posteriori comparisons indicated that no two groups were significantly different at the .05 level.

Nationality $\times$ outcome (success/failure) interactions. The country-by-outcome interaction was also significant, $F(16, 1294) = 1.67, p < .05$. The results of univariate test are summarized as follows:

Ability. The univariate tests indicated that interaction between outcome and nationality was not significant for ability, $F(4, 328) = 1.02, p = 40$. As Table 1 shows, all nationality groups attributed more ability to success outcomes than to failure outcomes.

Effort. The univariate interaction between outcome and nationality of subjects was significant on the measures of effort, $F(4, 328) = 2.71, p < .03$. Specifically, Americans attributed more to effort for success than for failure, $F(1, 68) = 7.62$, $p < .007$. By contrast, Korean students attributed more to effort for failure than for success. $F(1, 67) = 5.72, p < .02$. Chinese, Japanese, and Southeast Asian subjects all judged effort to be equally important for success and failure.

Task. The interaction between outcome and nationality was not significant for task, $F(4, 328) = 1.70, p = 1.49$. All nationality groups believed that their successes more than failures were due to task factor.

Luck. There was a significant effort of outcome by nationality effect for luck, $F(4, 328) = 2.40, p < .05$. As can be seen in Table 1, all groups equally attributed luck for successes and failures, with one exception: Korean students believed that good luck contributed more to their success than bad luck to their failure, $F(1, 67) = 9.15, p < .004$.

Gender Effect

The means of attributions by gender and outcome are presented in Table 2. MANOVA results indicated that male and female students did not significantly differ in the ratings of the attributions for achievement. $F(1, 325) = .288, p = .886$. Both male and female students believed that effort was the most important factor for academic achievement, followed by ability, task and luck.

Interaction of gender and nationality. Gender appeared in significant interactions with nationality, $F(16, 1294) = 2.15, p < .005$.

The univariate tests revealed that interactions between gender and nationality were not significant for ability, $F(4, 328) = 1.05, p = .38$, (b) task, $F(4, 328) = 1.85, p = .12$ and (c) luck, $F(4, 328) = 2.33, p < .06$. indicating that no gender differences were found for attributions to (a) ability, (b) task , and (c) luck.

However, the univariate interaction between gender and nationality of subject was significant on the measures of effort, $F(4, 328) = 3.86, p < .004$. Specifically, American males attributed their academic achievements more to effort than did American females, $t(67) = 2.76, p < .007$. The same is the true for Korean students. Korean male students attributed achievements more to effort than did female Koreans, $t(66) = 2.66, p < .01$. For other Asian students, both male and female students all

TABLE 2
Attributions for Academic Achievement as a Function of
Interactions of Gender and Nationality of Subject

Gender	American	Chinese	Japanese	Korean	Southeast Asian	Pooled Mean
			Ability			
Female	20.85	18.13	18.71	18.00	18.59	18.60
Male	20.94	17.83	18.03	19.51	18.88	18.58
			Effort			
Female	23.12	22.87	22.85	22.36	23.38	22.59
Male	25.66	22.27	22.53	24.74	21.65	22.85
			Task			
Female	16.94	14.66	17.07	16.03	14.94	15.63
Male	16.83	15.60	14.84	16.12	15.41	15.61
			Luck			
Female	15.15	13.71	15.75	16.31	13.85	14.69
Male	14.51	15.30	14.31	15.18	15.20	14.92

TABLE 3.
Attributions for Academic Achievement as a Function of Interactions of Gender and Outcomes (Success/Failure)

	Female		Male	
	Success	**Failure**	**Success**	**Failure**
Ability	10.76	7.83	10.94	7.64
Effort	11.46	11.14	11.42	11.43
Task	7.90	7.73	8.30	7.32
Luck	7.58	7.11	7.56	7.34

judged effort to be equally responsible for their achievements.

Gender by outcome interaction. MANOVA results yielded a significant interaction of gender and outcome (success/failure), $F(4, 325) = 2.48, p < .04$. The means of attribution ratings for the interaction are presented in Table 3.

The univariate tests revealed that the significant interactions of gender and outcomes were due to the interaction for attribution of task, $F(1, 328) = 4.15, p < .04$. As shown in Table 3, male students tend to attribute success to easy tasks more than did female students, but tend to attribute their failure to the task difficulty less often than female students. Female students were more internal in orientation than their male classmates when they are making attributions for success, but more external in orientation than male students when they are making attributions for their failures.

Ability. No interaction of gender and outcome was found for ability, $F(1, 328) = .46, p = .49$. Both male students and female students tend to attribute their success to their high ability more than they attributed their failure to their lack of ability.

Effort. On the average, both the men and women believed that effort was the most important factor for their academic performance. They tend to attribute their success to their great effort equally as they attributed their failure to lack of effort, $F(1, 328) = .838, p = .36$.

TABLE 4
Attributions for Academic Achievement as a
Function of the Major of Subject

Major	Ability	Effort	Task	Luck
Management	18.63	23.09	15.77	14.36
Science/Engineering	18.86	23.45	14.86	14.43
Education/Social Sciences	18.24	21.59	16.24	15.70

Luck. Finally, no interaction of gender and outcome for luck emerged, $F(1, 328) = 2.14, p = .14$: both males and females attribute success to good luck equally as they attributed their failure to bad luck.

Academic Major Field Effects

The results of MANOVA revealed a significant academic major field effects on attribution scoring, $F(8, 648) = 5.30, p < .0001$. The mean scores of attributions made by students from three different majors, across outcome (success/failure), are presented in Table 4.

Students from three majors did not differ in attributions to ability, $F(2, 328) = 2.91, P < .06$. However, they significantly differed in the other three attributions: (a) for effort, $F(2, 328) = 10.70, p < .0001$; (b) for task, $F(2, 328) = 6.46, p < .002$; and (c) for luck, $F(2, 328) = 4.25, p < .01$. Scheffe posteriori comparisons can be summarized as follows:

Effort. On the average, students from the school of education and social science attributed academic achievement significantly less to effort than did the students in management than students enrolled in engineering, (all $p < .05$).

Task. There were significant differences in attribution to task among students from the education school and students from the engineering school. On the average, the students from the education school were more likely to attribute achievement to task

factor than did engineering students ($p < .05$).

Luck. On the average, students from the education and social science school were more likely to attributed their academic outcomes to luck than management students and engineering students (all $p < .05$).

The factor of academic major field did not significantly interact with outcome, and other independent factors, such as gender, nationality, (all $p > .05$). No other three ways interactions were found among the four independent factors (nationality, gender, academic major and outcomes).

SUMMARY AND CONCLUSIONS

In an effort to examine the causal attributions for college achievement and academic failure as a reflection of cultural background and ethos, a sample of 385 Asian and American undergraduate and graduate students enrolled in a variety of programs at a major state university was administered the Multi-dimensional-Multi-attribution Causality Scale developed by Lefcout et al. (1979). With the four attributions of ability, effort, task orientation, and luck as dependent variables, and culture, gender, academic major-field, and outcome as independent variables, a multivariate analysis variance yielded the following conclusions:

First, the study supports the differential attribution model for successes and failures (Weiner, 1986). On the average, subjects from all groups reported a higher average of personal responsibility for successes than for failures. They attributed success first to their effort, then to ability, task, and luck. For achievement failures, lack of effort again was the strongest attribution and was followed by lack of ability, task difficulty, and finally bad luck. This findings clearly evidenced that "individuals make differential attributions depending upon the success or failure of their achievement related behavior" (Weiner, 1986).

Second, the study supports the hypothesis of "self-serving bias" in attribution. Subjects across the five nationalities attributed their success more than failure to an internal factor — ability, and they attributed their achievement more to their own effort rather than to their ability, or task, or luck. For achievement failures, all subjects believed that lack of effort was the strongest attribution. This evidence indicates that attributions for success to one's own effort and ability are self-serving in that they convey a sense in powerment. Even attributing failure to lack of effort may be self-serving as one is more likely to strive for future success (Whitley & Frieze, 1985).

Third, American students attributed their academic achievement significantly more often to ability than did the Asian subjects. American students appeared to believe effort, in itself, was more important for their success than lack of effort could account for failure. On the other hand, Asian students attributed efforts as equally important for success and failure or even more important for failure than for success.

These cultural variations may echo different cultural emphases. The findings for Americans on internal factors (i.e., ability and effort) may mirror the higher value placed on individualism in the United States (Smith et al.,1987). Asians' greater stress on effort may point up their stronger belief that lack of effort is a type of internal, unstable, but controllable cause for failure (Weiner, 1979). Great and more substantial efforts in the future might preclude continued failure. This may also underscore Asian students ability to resist learned helplessness (Mizokawa & Rychkman, 1990).

Fourth, the present sample of Asian students appeared more similar than different in causal attributions, due, perhaps, to their common academic experiences. As follow-up interviews revealed, Asian students all experienced the same self-selection in coming to the United States. They told of their feelings of pride in being able to

study in the United States, coming after their earlier academic successes at home, otherwise, they could not have been able to complete their studies nor been able to apply to school abroad.

Fifth, significant differences between males and females were not found in the attributions for achievement. However, a significance of interaction of gender and success/failure for attributions to task surfaced, indicating that female students were more external but in some circumstance.

And finally, a significant academic major field effect on causal attributions emerged. Students majoring in management, natural science, and engineering appeared to believe effort to be more important in their successful achievement than did students who majored in education and the social sciences. Follow up interviews revealed that students who major in management and engineering spent considerable more time on experiments and in the computer room, and examinations they believed to be more demanding and requiring greater effort than facing their classmates in the social science or education.

As increasing numbers of Asian students enter universities in the United States, more attention needs to be given to their frames of references for success. The present study points up some implications for multicultural education to help to understand the factors that have such crucial importance in the university lives of the foreign college students' performance.

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